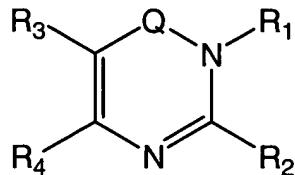


What is claimed is:

1. A compound comprising Formula X:



X

wherein

Q is selected from the group consisting of CO, CS, SO, SO₂, or C=NR₉;

R₁ is -ZR_m, where Z is a moiety providing 1-6 atom separation between R_m and the ring to which R₁ is attached, and R_m is selected from the group consisting of a substituted or unsubstituted (C₃₋₇)cycloalkyl and aryl;

R₂ is selected from the group consisting of a substituted or unsubstituted 3, 4, 5, 6 or 7 membered ring;

R₃ and R₄ are taken together to form a substituted or unsubstituted 5 or 6 membered ring; and

R₉ is hydrogen or is selected from the group consisting of alkyl, cycloalkyl, heterocycloalkyl, arylalkyl, heteroarylalkyl, bicycloaryl, and heterobicycloaryl, each substituted or unsubstituted.

2. A compound according to claim 1, wherein Z provides 1-3 atom separation between R_m and the ring.

3. A compound according to claim 1, wherein Z provides 1 atom separation between R_m and the ring.

4. A compound according to claim 1, wherein the Z provides a 1 atom separation that is provided by an atom selected from the group consisting of C, N, O, and S.

5. A compound according to claim 1, wherein Z provides a 1 atom separation that is provided by a carbon atom.
6. A compound according to claim 1, wherein Z provides a 1 atom separation that is provided by an oxygen atom.
7. A compound according to claim 1, wherein Z provides a 1 atom separation that is provided by a nitrogen atom.
8. A compound according to claim 1, wherein Z is selected from the group consisting of -CH₂-, -CH₂CH₂-, -CH₂CH₂CH₂-, -C(O)-, -CH₂C(O)-, -C(O)CH₂-, -CH₂-C(O)CH₂-, -C(O)CH₂CH₂-, -CH₂CH₂C(O)-, -O-, -OCH₂-, -CH₂O-, -CH₂OCH₂-, -OCH₂CH₂-, -CH₂CH₂O-, -N(CH₃)-, -NHCH₂-, -CH₂NH-, -CH₂NHCH₂-, -NHCH₂CH₂-, -CH₂CH₂NH-, -NH-C(O)-, -NCH₃-C(O)-, -C(O)NH-, -C(O)NCH₃-, -NHC(O)CH₂-, -C(O)NHCH₂-, -C(O)CH₂NH-, -CH₂NHC(O)-, -CH₂C(O)NH-, -NHCH₂C(O)-, -S-, -SCH₂-, -CH₂S-, -SCH₂CH₂-, -CH₂SCH₂-, -CH₂CH₂S-, -C(O)S-, -C(O)SCH₂-, -CH₂C(O)S-, -C(O)CH₂S-, and -CH₂SC(O)-, each substituted or unsubstituted.
9. A compound according to claim 1, wherein Z is selected from the group consisting of -CH₂-, -CHR₉-, -C(R₉)(R₉)-, -C(O)-, -C(S)-, -C(NH)-, -C(NR₉)-, -O-, -N(H)-, -N(R₉)-, and -S-.
10. A compound according to claim 1, wherein R_m is a substituted or unsubstituted (C₃₋₇)cycloalkyl.
11. A compound according to claim 1, wherein R_m is a substituted or unsubstituted aryl.
12. A compound according to claim 1, wherein R_m is a substituted or unsubstituted phenyl.
13. A compound according to claim 1, wherein R_m is selected from the group consisting of (2-cyano)phenyl, (3-cyano)phenyl, (2-hydroxy)phenyl, (3-hydroxy)phenyl, (2-alkenyl)phenyl, (3-

alkenyl)phenyl, (2-alkynyl)phenyl, (3-alkynyl)phenyl, (2-nitro)phenyl, (3-nitro)phenyl, (2-carboxy)phenyl, (3-carboxy)phenyl, (2-carboxamido)phenyl, (3-carboxamido)phenyl, (2-sulfonamido)phenyl, (3-sulfonamido)phenyl, (2-tetrazolyl)phenyl, (3-tetrazolyl)phenyl, (2-aminomethyl)phenyl, (3-aminomethyl)phenyl, (2-amino)phenyl, (3-amino)phenyl, (2-hydroxymethyl)phenyl, (3-hydroxymethyl)phenyl, (2-phenyl)phenyl, (3-phenyl)phenyl, (2-CONH₂)phenyl, (3-CONH₂)phenyl, (2-CONH(C₁₋₇)alkyl)phenyl, (3-CONH(C₁₋₇)alkyl)phenyl, (2-CO₂(C₁₋₇)alkyl)phenyl, (3-CO₂(C₁₋₇)alkyl)phenyl, -NH₂, -OH, -(C₃₋₇)alkyl, -alkene, -alkyne, -CCH, -(C₃₋₇)cycloalkyl, and -aryl, each substituted or unsubstituted.

14. A compound according to claim 1, wherein R₁ is -OR₁₁, where R₁₁ is selected from the group consisting of substituted or unsubstituted alkyl, cycloalkyl, aryl, heteroaryl, heterocycloalkyl, arylalkyl, heteroarylalkyl, bicycloaryl, and heterobicycloaryl.

15. A compound according to claim 1, wherein Z is a carbonyl.

16. A compound according to claim 1, wherein R₁ is selected from the group consisting of -(CH₂)-(2-cyano)phenyl, -(CH₂)-(3-cyano)phenyl, -(CH₂)-(2-hydroxy)phenyl, -(CH₂)-(3-hydroxy)phenyl, -(CH₂)-(2-alkenyl)phenyl, -(CH₂)-(3-alkenyl)phenyl, -(CH₂)-(2-alkynyl)phenyl, -(CH₂)-(3-alkynyl)phenyl, -(CH₂)-(2-nitro)phenyl, -(CH₂)-(3-nitro)phenyl, -(CH₂)-(2-carboxy)phenyl, -(CH₂)-(3-carboxy)phenyl, -(CH₂)-(2-carboxamido)phenyl, -(CH₂)-(3-carboxamido)phenyl, -(CH₂)-(2-sulfonamido)phenyl, -(CH₂)-(3-sulfonamido)phenyl, -(CH₂)-(2-tetrazolyl)phenyl, -(CH₂)-(3-tetrazolyl)phenyl, -(CH₂)-(2-aminomethyl)phenyl, -(CH₂)-(3-aminomethyl)phenyl, -(CH₂)-(2-amino)phenyl, -(CH₂)-(3-amino)phenyl, -(CH₂)-(2-hydroxymethyl)phenyl, -(CH₂)-(3-hydroxymethyl)phenyl, -(CH₂)-(2-phenyl)phenyl, -(CH₂)-(3-phenyl)phenyl, -(CH₂)-(2-CONH₂)phenyl, -(CH₂)-(3-CONH₂)phenyl, -(CH₂)-(2-CONH(C₁₋₇)alkyl)phenyl, -(CH₂)-(3-CONH(C₁₋₇)alkyl)phenyl, -(CH₂)-(2-CO₂(C₁₋₇)alkyl)phenyl, -(CH₂)-(3-CO₂(C₁₋₇)alkyl)phenyl, -CH₂-NH₂, -CH₂-OH, -CH₂-(C₃₋₇)alkyl, -CH₂-alkene, -CH₂-alkyne, -CH₂-CCH, -CH₂-(C₃₋₇)cycloalkyl, and -CH₂-aryl, each substituted or unsubstituted.

17. A compound according to claim 1, wherein R₁ is selected from the group consisting of -(C₁)alkyl-aryl, -(C₁)alkyl-bicycloaryl, -aminoaryl, -aminoheteroaryl, -aminobicycloaryl, -aminoheterobicycloaryl, -O-aryl, -O-heteroaryl, -O-bicycloaryl, -O-heterobicycloaryl, -(S)-aryl, -(S)-heteroaryl, -(S)-bicycloaryl, -S-heterobicycloaryl, -C(O)-aryl, -C(O)-heteroaryl, -C(O)-bicycloaryl, -C(O)-heterobicycloaryl, -C(S)-aryl, -C(S)-heteroaryl, -C(S)-bicycloaryl, -C(S)-heterobicycloaryl, -S(O)-aryl, -S(O)-heteroaryl, -S(O)-bicycloaryl, -SO₂-heterobicycloaryl, -SO₂-aryl, -SO₂-heteroaryl, -SO₂-bicycloaryl, -SO₂-heterobicycloaryl, -C(NR₉)-aryl, -C(NR₉)-heteroaryl, -C(NR₉)-bicycloaryl, -C(NR₉)-heterobicycloaryl, each substituted or unsubstituted.

18. A compound according to claim 1, wherein R₂ is a substituted or unsubstituted 3, 4, 5, 6, or 7 membered cycloalkyl.

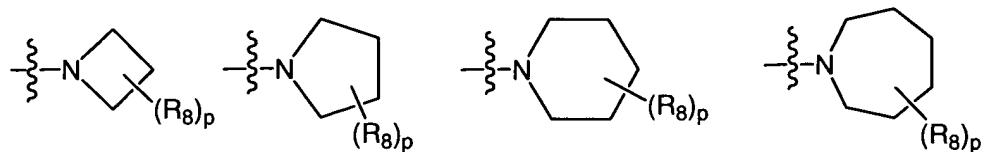
19. A compound according to claim 1, wherein R₂ is a substituted or unsubstituted 4, 5, 6, or 7 membered heterocycloalkyl.

20. A compound according to claim 1, wherein R₂ is a substituted or unsubstituted aryl.

21. A compound according to claim 1, wherein R₂ is substituted or unsubstituted phenyl.

22. A compound according to claim 1, wherein R₂ is a substituted or unsubstituted heteroaryl.

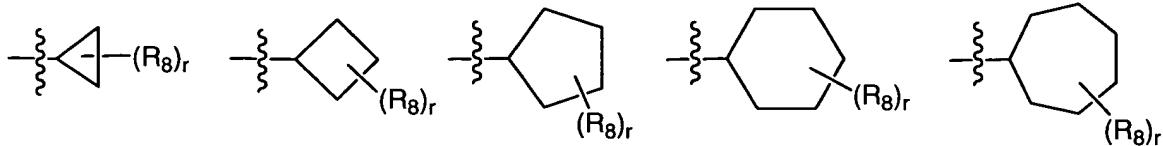
23. A compound according to claim 1, wherein R₂ is selected from the group consisting of



wherein p is 0-12 and each R₈ is independently selected from the group consisting of halo, perhalo(C₁₋₁₀)alkyl, CF₃, cyano, nitro, hydroxy, alkyl, aryl, heteroaryl, aminosulfonyl, alkylsulfonyl,

arylsulfonyl, heteroarylsulfonyl, aryloxy, heteroaryloxy, arylalkyl, heteroarylalkyl, cycloalkyl, heterocycloalkyl, amino, thio, alkoxy, carbonyl group, imino group, sulfonyl group and sulfinyl group, each substituted or unsubstituted.

24. A compound according to claim 1, wherein R₂ is selected from the group consisting of



wherein r is 0-13 and each R₈ is independently selected from the group consisting of halo, perhalo(C₁₋₁₀)alkyl, CF₃, cyano, nitro, hydroxy, alkyl, aryl, heteroaryl, aminosulfonyl, alkylsulfonyl, arylsulfonyl, heteroarylsulfonyl, aryloxy, heteroaryloxy, arylalkyl, heteroarylalkyl, cycloalkyl, heterocycloalkyl, amino, thio, alkoxy, carbonyl group, imino group, sulfonyl group and sulfinyl group, each substituted or unsubstituted.

25. A compound according to claim 1, wherein R₂ is a substituted or unsubstituted heteroaryl selected from the group consisting of furan, thiophene, pyrrole, pyrazole, triazole, isoxazole, oxazole, thiazole, isothiazole, oxadiazole, pyridine, pyridazine, pyrimidine, pyrazine, triazine, benzofuran, isobenzofuran, benzothiophene, isobenzothiophene, imidazole, benzimidazole, indole, isoindole, quinoline, isoquinoline, cinnoline, quinazoline, naphthyridine, pyridopyridine, quinoxaline, phthalazine, and benzothiazole, each substituted or unsubstituted.

26. A compound according to claim 1, wherein R₂ is selected from the group consisting of (C₃₋₁₂)cycloalkyl, hetero(C₃₋₁₂)cycloalkyl, aryl(C₁₋₁₀)alkyl, heteroaryl (C₁₋₅)alkyl, (C₉₋₁₂)bicycloaryl, and hetero(C₄₋₁₂)bicycloaryl, each substituted or unsubstituted.

27. A compound according to claim 1, wherein R₂ is a substituted or unsubstituted (C₃₋₇)cycloalkyl ring, optionally comprising O, N(O), N, S, SO, SO₂ or a carbonyl group in the ring.

28. A compound according to claim 1, where R₃ and R₄ are taken together to form an unsubstituted or substituted 5 or 6 membered cycloalkyl or heterocycloalkyl ring.

29. A compound according to claim 1, where R₃ and R₄ are taken together to form a substituted or unsubstituted phenyl ring.

30. A compound according to claim 1, where R₃ and R₄ are taken together to form a substituted or unsubstituted heteroaryl ring.

31. A compound according to claim 1, where R₃ and R₄ are taken together to form a substituted or unsubstituted heteroaryl selected from the group consisting of substituted or unsubstituted furan, thiophene, pyrrole, pyrazole, triazole, isoxazole, oxazole, thiazole, isothiazole, oxadiazole, pyridine, pyridazine, pyrimidine, pyrazine, triazine, benzofuran, isobenzofuran, benzothiophene, isobenzothiophene, imidazole, benzimidazole, indole, isoindole, quinoline, isoquinoline, cinnoline, quinazoline, naphthyridine, pyridopyridine, quinoxaline, phthalazine, and benzothiazole.

32. A compound according to claim 1, where R₃ and R₄ are taken together to form a 5 or 6-membered ring where the ring comprises at least one CO group.

33. A compound according to claim 1, where R₃ and R₄ are taken together to form a 5 or 6-membered ring comprising of 1-3 nitrogen ring atoms.

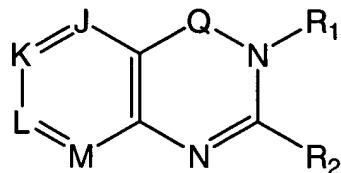
34. A compound according to claim 1, where R₃ and R₄ are taken together to form a 5 or 6-membered ring where the ring comprises a sulfur atom.

35. A compound according to claim 34, wherein the ring sulfur atom is in an oxidized form as SO or SO₂.

36. A compound according to claim 1, wherein the ring formed by R₃ and R₄ comprises substituents that form a ring fused to the ring formed by R₃ and R₄.

37. A compound according to claim 1, wherein R₃ and R₄ are taken together to form a ring system such that the compound of Formula X formed is selected from the group consisting of substituted or unsubstituted 4-oxo-4H-quinazoline, 3H-pyrido[2,3-d]pyrimidin-4-one, 3H-pyrido[3,2-d]pyrimidin-4-one, 3H-pyrido[3,4-d]pyrimidin-4-one and 3H-pyrido[4,3-d]pyrimidin-4-one.

38. A compound comprising Formula XI:



XI

wherein

Q is selected from the group consisting of CO, CS, SO, SO₂, or C=NR₉;

J, K, L, and M are each independently selected from the group of CR₁₂ and N;

R₁ is -ZR_m, where Z is a moiety providing 1-6 atom separation between R_m and the ring to which R₁ is attached, and R_m is selected from the group consisting of a substituted or unsubstituted (C₃₋₇)cycloalkyl and aryl;

R₂ is selected from the group consisting of a substituted or unsubstituted 3, 4, 5, 6 or 7 membered ring;

R₉ is hydrogen or is selected from the group consisting of alkyl, cycloalkyl, heterocycloalkyl, arylalkyl, heteroarylalkyl, bicycloaryl, and heterobicycloaryl, each substituted or unsubstituted; and

each R₁₂ is hydrogen or is independently selected from the group consisting of halo, perhalo(C₁₋₁₀)alkyl, CF₃, alkyl, aryl, heteroaryl, aminosulfonyl, alkylsulfonyl, arylsulfonyl, heteroarylsulfonyl, aryloxy, heteroaryloxy, arylalkyl, heteroarylalkyl, cycloalkyl,

heterocycloalkyl, amino, thio, cyano, nitro, alkoxy, a carbonyl group, imine group, sulfonyl group and sulfinyl group, each substituted or unsubstituted.

39. A compound according to claim 38, wherein the compound is a compound where J, K, L and M each comprise a carbon ring atom.

40. A compound according to claim 38, wherein the compound is a compound where J comprises a nitrogen ring atom.

41. A compound according to claim 38, wherein the compound is a compound where K comprises a nitrogen ring atom.

42. A compound according to claim 38, wherein the compound is a compound where L comprises a nitrogen ring atom.

43. A compound according to claim 38, wherein the compound is a compound where M comprises a nitrogen ring atom.

44. A compound according to claim 38, wherein the compound is a compound where J and L each comprise a nitrogen ring atom or J and K each comprise a nitrogen ring atom.

45. A compound according to claim 38, wherein the compound is a compound where K and L each comprise a nitrogen ring atom.

46. A compound according to claim 38, wherein the compound is a compound where K and M each comprise a nitrogen ring atom.

47. A compound according to claim 38, wherein the compound is a compound where J and M each comprise a nitrogen ring atom or L and M each comprise a nitrogen ring atom.

48. A compound according to claim 38, wherein at least two of J, K, L and M comprise a nitrogen ring atom.

49. A compound according to claim 38, wherein at least three of J, K, L and M comprise a nitrogen ring atom.

50. A compound according to claim 38, wherein the ring formed by J, K, L, and M comprises substituents that form a ring fused to or bridged to the ring formed by J, K, L, and M.

51. A compound according to claim 38, wherein K is CR₁₂, where R₁₂ is independently selected from the group consisting of halo, perhalo(C₁₋₁₀)alkyl, CF₃, alkyl, aryl, heteroaryl, aminosulfonyl, alkylsulfonyl, arylsulfonyl, heteroarylsulfonyl, aryloxy, heteroaryloxy, arylalkyl, heteroarylalkyl, cycloalkyl, heterocycloalkyl, amino, thio, cyano, nitro, alkoxy, a carbonyl group, imine group, sulfonyl group and sulfinyl group, each substituted or unsubstituted.

52. A compound according to claim 38, wherein K is CR₁₂, where R₁₂ is independently selected from the group consisting of halo, perhalo(C₁₋₁₀)alkyl, CF₃, cyano, nitro, alkyl, aryloxy, heteroaryloxy, amino, and alkoxy, each substituted or unsubstituted.

53. A compound according to claim 38, wherein K is CR₁₂, where R₁₂ is independently selected from the group consisting of heteroaryl, aminosulfonyl, alkylsulfonyl, arylsulfonyl, heteroarylsulfonyl, aryl, arylalkyl, heteroarylalkyl, cycloalkyl, heterocycloalkyl, thio, a carbonyl group, imine group, sulfonyl group and sulfinyl group, each substituted or unsubstituted.

54. A compound according to claim 38, wherein K is CR₁₂, where R₁₂ is independently selected from the group consisting of chloro, bromo, fluoro, iodo, methoxy, morpholin-4-yl, and pyrrolidin-1-yl, each substituted or unsubstituted.

55. A compound according to claim 38, wherein L is CR₁₂, where R₁₂ is independently selected from the group consisting of halo, perhalo(C₁₋₁₀)alkyl, CF₃, alkyl, aryl, heteroaryl,

aminosulfonyl, alkylsulfonyl, arylsulfonyl, heteroarylsulfonyl, aryloxy, heteroaryloxy, arylalkyl, heteroarylalkyl, cycloalkyl, heterocycloalkyl, amino, thio, cyano, nitro, alkoxy, a carbonyl group, imine group, sulfonyl group and sulfinyl group, each substituted or unsubstituted.

56. A compound according to claim 38, wherein L is CR₁₂, where R₁₂ is independently selected from the group consisting of halo, perhalo(C₁₋₁₀)alkyl, CF₃, cyano, nitro, alkyl, aryloxy, heteroaryloxy, amino, morpholin-4-yl, and pyrrolidin-1-yl, and alkoxy, each substituted or unsubstituted.

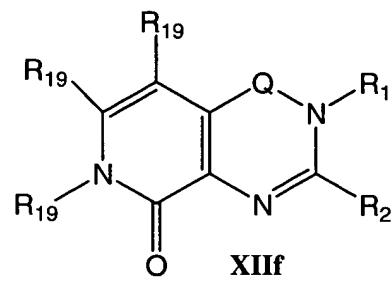
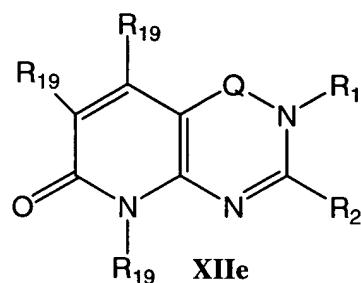
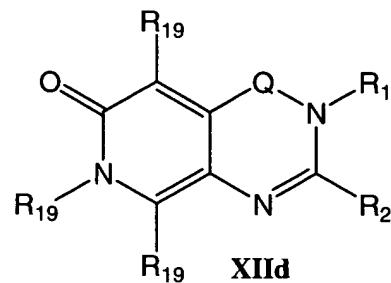
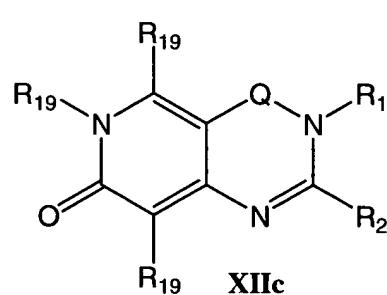
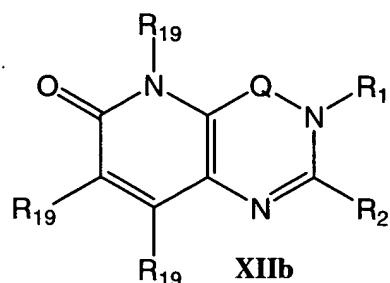
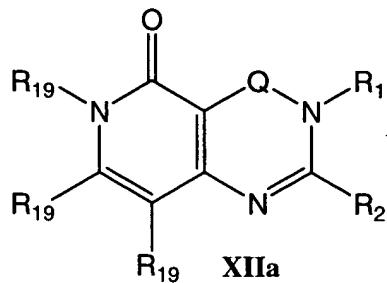
57. A compound according to claim 38, wherein K and L are independently CR₁₂, where R₁₂ is independently selected from the group consisting of halo, perhalo(C₁₋₁₀)alkyl, CF₃, cyano, nitro, alkyl, aryl, heteroaryl, aminosulfonyl, alkylsulfonyl, arylsulfonyl, heteroarylsulfonyl, aryloxy, heteroaryloxy, arylalkyl, heteroarylalkyl, cycloalkyl, heterocycloalkyl, amino, thio, alkoxy, a carbonyl group, imine group, sulfonyl group and sulfinyl group, each substituted or unsubstituted.

58. A compound according to claim 38, wherein:

K is CR₁₂, where R₁₂ is independently selected from the group consisting of halo, perhalo(C₁₋₁₀)alkyl, CF₃, cyano, nitro, alkyl, aryl, heteroaryl, aminosulfonyl, alkylsulfonyl, arylsulfonyl, heteroarylsulfonyl, aryloxy, heteroaryloxy, arylalkyl, heteroarylalkyl, cycloalkyl, heterocycloalkyl, amino, thio, alkoxy, a carbonyl group, imine group, sulfonyl group and sulfinyl group, each substituted or unsubstituted; and

L is nitrogen.

59. A compound comprising a member selected from the group consisting of Formulae XIIa, XIIb, XIIc, XIId, XIIe and XIIf:



wherein

Q is selected from the group consisting of CO, CS, SO, SO₂, or C=NR₉;

R₁ is -ZR_m, where Z is a moiety providing 1-6 atom separation between R_m and the ring to which R₁ is attached, and R_m is selected from the group consisting of a substituted or unsubstituted (C₃₋₇)cycloalkyl and aryl;

R₂ is selected from the group consisting of a substituted or unsubstituted 3, 4, 5, 6 or 7 membered ring;

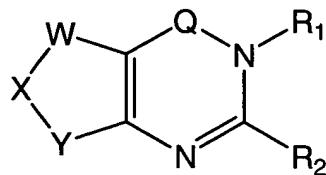
R₉ is hydrogen or is selected from the group consisting of alkyl, cycloalkyl, heterocycloalkyl, arylalkyl, heteroarylalkyl, bicycloaryl, and heterobicycloaryl, each substituted or unsubstituted; and

each R₁₉ is independently selected from the group consisting of hydrogen, halo, perhalo(C₁₋₁₀)alkyl, CF₃, cyano, nitro, alkyl, alkene, alkyne, aryl, heteroaryl, aminosulfonyl,

alkylsulfonyl, arylsulfonyl, heteroarylsulfonyl, aryloxy, heteroaryloxy, arylalkyl, heteroarylalkyl, cycloalkyl, heterocycloalkyl, amino, thio, alkoxy, carbonyl group, imine group, sulfonyl group and sulfinyl group, each substituted or unsubstituted, with the proviso that R₁₉ is not alkylthio, arylthio, halo, cyano, nitro, and thio in the case where the ring atom to which R₁₉ is bound is nitrogen.

60. A compound according to claim 59, wherein two R₁₉ are taken together to form a substituted or unsubstituted fused or bridged ring.

61. A compound comprising Formula XIII:



XIII

wherein

Q is selected from the group consisting of CO, CS, SO, SO₂, or C=NR₉;

W, X, and Y are each independently selected from the group of moieties where the ring atom is either C, N, O or S;

R₁ is -ZR_m, where Z is a moiety providing 1-6 atom separation between R_m and the ring to which R₁ is attached, and R_m is selected from the group consisting of a substituted or unsubstituted (C₃₋₇)cycloalkyl and aryl;

R₂ is selected from the group consisting of a substituted or unsubstituted 3, 4, 5, 6 or 7 membered ring;

R₉ is hydrogen or is selected from the group consisting of alkyl, cycloalkyl, heterocycloalkyl, arylalkyl, heteroarylalkyl, bicycloaryl, and heterobicycloaryl, each substituted or unsubstituted.

62. A compound according to claim 61, wherein at least one of W, X, and Y is CO.

63. A compound according to claim 61, wherein at least one of W, X, and Y is SO.

64. A compound according to claim 61, wherein at least one of W, X, and Y is SO₂.

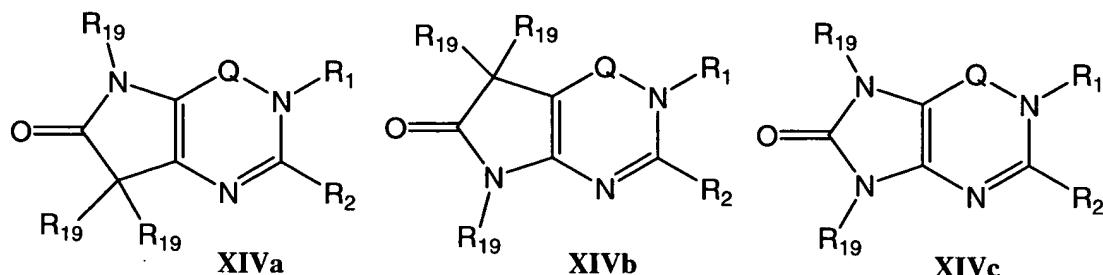
65. A compound according to claim 61, wherein at least one of W, X, and Y comprises a ring nitrogen atom.

66. A compound according to claim 61, wherein at least two of W, X, and Y comprises a ring nitrogen atom.

67. A compound according to claim 61, wherein W and Y are taken together to form a substituted or unsubstituted bridged ring relative to the ring formed by W, X and Y.

68. A compound according to claim 61, wherein two of W, X, and Y are taken together to form a substituted or unsubstituted ring fused to the ring formed by W, X and Y.

69. A compound comprising a member selected from the group consisting of Formulae XIVa, XIVb or XIVc:



wherein

Q is selected from the group consisting of CO, CS, SO, SO₂, or C=NR₉;

R_1 is $-ZR_m$, where Z is a moiety providing 1-6 atom separation between R_m and the ring to which R_1 is attached, and R_m is selected from the group consisting of a substituted or unsubstituted (C_3 -7)cycloalkyl and aryl;

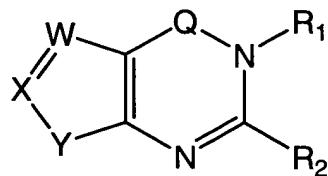
R_2 is selected from the group consisting of a substituted or unsubstituted 3, 4, 5, 6 or 7 membered ring;

R_9 is hydrogen or is selected from the group consisting of alkyl, cycloalkyl, heterocycloalkyl, arylalkyl, heteroarylalkyl, bicycloaryl, and heterobicycloaryl, each substituted or unsubstituted; and

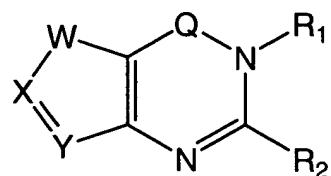
each R_{19} is independently selected from the group consisting of hydrogen, halo, perhalo(C_1 -10)alkyl, CF_3 , cyano, nitro, alkyl, alkene, alkyne, aryl, heteroaryl, aminosulfonyl, alkylsulfonyl, arylsulfonyl, heteroarylsulfonyl, aryloxy, heteroaryloxy, arylalkyl, heteroarylalkyl, cycloalkyl, heterocycloalkyl, amino, thio, alkoxy, carbonyl group, imine group, sulfonyl group and sulfinyl group, each substituted or unsubstituted, with the proviso that R_{19} is not alkylthio, arylthio, halo, cyano, nitro, and thio in the case where the ring atom to which R_{19} is bound is nitrogen.

70. A compound according to claim 69, wherein two R_{19} are taken together to form a substituted or unsubstituted bridged or spiro ring.

71. A compound comprising Formula XVa or Formula XVb:



XVa



XVb

wherein

Q is selected from the group consisting of CO , CS , SO , SO_2 , or $C=NR_9$;

W , X , and Y are each independently selected from the group of moieties where the ring atom is either C , N , O or S ;

R_1 is $-ZR_m$, where Z is a moiety providing 1-6 atom separation between R_m and the ring to which R_1 is attached, and R_m is selected from the group consisting of a substituted or unsubstituted (C_{3-7})cycloalkyl and aryl;

R_2 is selected from the group consisting of a substituted or unsubstituted 3, 4, 5, 6 or 7 membered ring; and

R_9 is hydrogen or is selected from the group consisting of alkyl, cycloalkyl, heterocycloalkyl, arylalkyl, heteroarylalkyl, bicycloaryl, and heterobicycloaryl, each substituted or unsubstituted.

72. A compound according to claim 71, wherein the compound is a compound of Formula XVa wherein Y is selected from the group consisting of CO , SO or SO_2 .

73. A compound according to claim 71, wherein the compound is a compound of Formula XVb wherein W is selected from the group consisting of CO , SO or SO_2 .

74. A compound according to claim 71, wherein W comprise a ring nitrogen atom.

75. A compound according to claim 71, wherein X comprise a ring nitrogen atom.

76. A compound according to claim 71, wherein Y comprise a ring nitrogen atom.

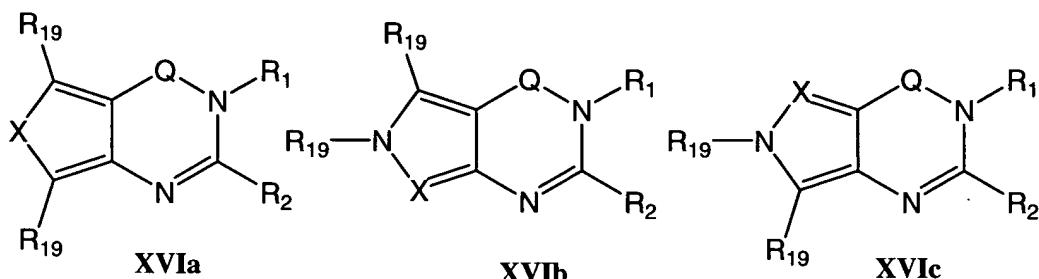
77. A compound according to claim 71, wherein at least two of W , X , and Y comprises a ring nitrogen atom.

78. A compound according to claim 71, wherein two of W , X , and Y are taken together and substituted through available valencies to form a substituted or unsubstituted ring fused or bridged to the ring formed by W , X and Y .

79. A compound according to claim 71, wherein W , X , and Y are selected such that the compound comprises a ring system selected from the group consisting of 4-oxo-4H-thieno[3,2-

d]pyrimidine, 7-oxo-1,2,3,7-tetrahydro-8-thia-4,6-diaza-cyclopenta[a]indene, 7-methyl-6-oxo-6,7-dihydro-purine, and 6-oxo-6,9-dihydro-purine, each substituted or unsubstituted.

80. A compound comprising Formulae XVIa, XVIb, or XVIc:



wherein

Q is selected from the group consisting of CO, CS, SO, SO₂, or C=NR₉;

X is selected from the group of moieties where the ring atom is either C, N, O or S in Formula XVIa, or X is selected from the group of moieties where the ring atom is either C or N in Formula XVIb or Formula XVIc;

R₁ is -ZR_m, where Z is a moiety providing 1-6 atom separation between R_m and the ring to which R₁ is attached, and R_m is selected from the group consisting of a substituted or unsubstituted (C₃₋₇)cycloalkyl and aryl;

R₂ is selected from the group consisting of a substituted or unsubstituted 3, 4, 5, 6 or 7 membered ring;

R₉ is hydrogen or is selected from the group consisting of alkyl, cycloalkyl, heterocycloalkyl, arylalkyl, heteroarylalkyl, bicycloaryl, and heterobicycloaryl, each substituted or unsubstituted; and

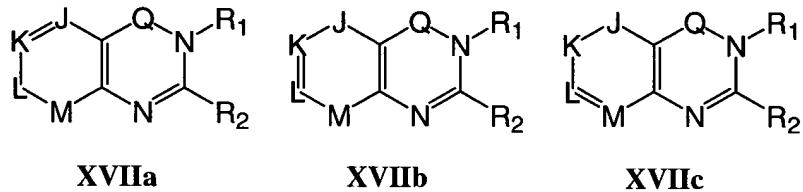
each R₁₉ is independently selected from the group consisting of hydrogen, halo, perhalo(C₁₋₁₀)alkyl, CF₃, cyano, nitro, alkyl, alkene, alkyne, aryl, heteroaryl, aminosulfonyl, alkylsulfonyl, arylsulfonyl, heteroarylsulfonyl, aryloxy, heteroaryloxy, arylalkyl, heteroarylalkyl, cycloalkyl, heterocycloalkyl, amino, thio, alkoxy, carbonyl group, imine group, sulfonyl group and sulfinyl group, each substituted or unsubstituted, with the proviso that R₁₉ is not alkylthio,

arylthio, halo, cyano, nitro, and thio in the case where the ring atom to which R₁₉ is bound is nitrogen.

81. A compound according to claim 80, wherein two R₁₉ are taken together to form a substituted or unsubstituted ring.

82. A compound according to claim 80, wherein the compound comprises Formula XVIa and the two R₁₉ are taken together to form a substituted or unsubstituted fused or bridged ring.

83. A compound comprising a member selected from the group of Formulae XVIIa, XVIIb and XVIIc:



wherein

Q is selected from the group consisting of CO, CS, SO, SO₂, or C=NR₉;

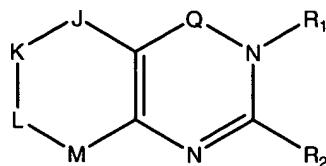
J, K, L, and M are each independently selected from the group of moieties where the ring atom is either C, N, O or S;

R₁ is -ZR_m, where Z is a moiety providing 1-6 atom separation between R_m and the ring to which R₁ is attached, and R_m is selected from the group consisting of a substituted or unsubstituted (C₃₋₇)cycloalkyl and aryl; and

R₂ is selected from the group consisting of a substituted or unsubstituted 3, 4, 5, 6 or 7 membered ring.

84. A compound according to claim 83, wherein the compound is a compound where J, K, L and M each comprise a carbon ring atom.

85. A compound according to claim 83, wherein at least one of J, K, L and M comprise a nitrogen ring atom.
86. A compound according to claim 83, wherein the compound is a compound where J and K each comprise a nitrogen ring atom or J and L each comprise a nitrogen ring atom.
87. A compound according to claim 83, wherein the compound is a compound where K and L each comprise a nitrogen ring atom or K and M each comprise a nitrogen atom.
88. A compound according to claim 83, wherein the compound is a compound where J and M each comprise a nitrogen ring atom or L and M each comprise a nitrogen ring atom.
89. A compound according to claim 83, wherein at least two of J, K, L and M comprise a nitrogen ring atom.
90. A compound according to claim 83, wherein at least three of J, K, L and M comprise a nitrogen ring atom.
91. A compound according to claim 83, wherein at least one of J, K, L and M is CO.
92. A compound according to claim 83, wherein at least one of J, K, L and M is SO.
93. A compound according to claim 83, wherein at least one of J, K, L and M is SO₂.
94. A compound according to claim 83, wherein the ring formed by J, K, L, and M comprises substituents, through available valencies, that form a ring fused to the ring formed by J, K, L, and M or, in the case of Formula XVIIb, J and M form a bridged ring relative to the ring formed by J, K, L, and M.
95. A compound comprising Formula XVIII:



XVIII

wherein

Q is selected from the group consisting of CO, CS, SO, SO₂, or C=NR₉;

J, K, L, and M are each independently selected from the group of moieties where the ring atom is either C, N, O or S;

R₁ is -ZR_m, where Z is a moiety providing 1-6 atom separation between R_m and the ring to which R₁ is attached, and R_m is selected from the group consisting of a substituted or unsubstituted (C₃₋₇)cycloalkyl and aryl;

R₂ is selected from the group consisting of a substituted or unsubstituted 3, 4, 5, 6 or 7 membered ring; and

R₉ is hydrogen or is selected from the group consisting of alkyl, cycloalkyl, heterocycloalkyl, arylalkyl, heteroarylalkyl, bicycloaryl, and heterobicycloaryl, each substituted or unsubstituted.

96. A compound according to claim 95, wherein at least one of J, K, L and M is CO.

97. A compound according to claim 95, wherein at least one of J, K, L and M is SO.

98. A compound according to claim 95, wherein at least one of J, K, L and M is SO₂.

99. A compound according to claim 95, wherein the compound is a compound where J, K, L and M each comprise a carbon ring atom.

100. A compound according to claim 95, wherein the compound is a compound where J comprises a nitrogen ring atom.

101. A compound according to claim 95, wherein the compound is a compound where K comprises a nitrogen ring atom.

102. A compound according to claim 95, wherein the compound is a compound where L comprises a nitrogen ring atom.

103. A compound according to claim 95, wherein the compound is a compound where M comprises a nitrogen ring atom.

104. A compound according to claim 95, wherein the compound is a compound where J and K each comprise a nitrogen ring atom or J and L each comprise a nitrogen ring atom.

105. A compound according to claim 95, wherein the compound is a compound where K and L each comprise a nitrogen ring atom or K and M each comprise a nitrogen atom.

106. A compound according to claim 95, wherein the compound is a compound where J and M each comprise a nitrogen ring atom or L and M each comprise a nitrogen ring atom.

107. A compound according to claim 95, wherein at least two of J, K, L and M comprise a nitrogen ring atom.

108. A compound according to claim 95, wherein at least three of J, K, L and M comprise a nitrogen ring atom.

109. A compound according to claim 95, wherein the ring formed by J, K, L, and M comprises substituents that form a ring fused to the ring formed by J, K, L, and M.

110. A compound according to claim 95, wherein the ring formed by J, K, L, and M comprises substituents that form a bridged ring relative to the ring formed by J, K, L, and M.

111. A compound selected from the group consisting of:

2-[2-(3-Amino-piperidin-1-yl)-4-oxo-4*H*-quinazolin-3-ylmethyl]-benzonitrile;

2,4-Dichloro-quinazoline;

2-Chloro-3*H*-quinazolin-4-one;

2-(2-Chloro-4-oxo-4*H*-quinazolin-3-ylmethyl)-benzonitrile;

2-[2-(3-Amino-piperidin-1-yl)-6,7-dimethoxy-4-oxo-4*H*-quinazolin-3-ylmethyl]-benzonitrile;

2-Chloro-6,7-dimethoxy-3*H*-quinazolin-4-one;

2-(2-Chloro-6,7-dimethoxy-4-oxo-4*H*-quinazolin-3-ylmethyl)-benzonitrile;

2-[2-(3-Amino-piperidin-1-yl)-8-methoxy-4-oxo-4*H*-quinazolin-3-ylmethyl]-benzonitrile;

8-Methoxy-1*H*-quinazoline-2,4-dione;

2,4-Dichloro-8-methoxy-quinazoline;

2-Chloro-8-methoxy-3*H*-quinazolin-4-one;

2-(2-Chloro-8-methoxy-4-oxo-4*H*-quinazolin-3-ylmethyl)-benzonitrile;

2-[2-(3-Amino-piperidin-1-yl)-7-chloro-4-oxo-4*H*-quinazolin-3-ylmethyl]-benzonitrile,

TFA salt;

2,7-Dichloro-3*H*-quinazolin-4-one;

2-(2,7-Dichloro-4-oxo-4*H*-quinazolin-3-ylmethyl)-benzonitrile;

2-[2-(3-Amino-piperidin-1-yl)-8-chloro-4-oxo-4*H*-quinazolin-3-ylmethyl]-benzonitrile,

TFA salt;

2,8-Dichloro-3*H*-quinazolin-4-one;

2-(2,8-Dichloro-4-oxo-4*H*-quinazolin-3-ylmethyl)-benzonitrile;

6-Fluoro-1*H*-quinazoline-2,4-dione;

2,4-Dichloro-6-fluoro-quinazoline;

2-Chloro-6-fluoro-3*H*-quinazolin-4-one;

2-(2-Chloro-6-fluoro-4-oxo-4*H*-quinazolin-3-ylmethyl)-benzonitrile;

(R) 2-[2-(3-Amino-piperidin-1-yl)-6-fluoro-4-oxo-4*H*-quinazolin-3-ylmethyl]-benzonitrile

TFA salt;

2-[2-(3-Amino-piperidin-1-yl)-7-methyl-6-oxo-6,7-dihydro-purin-1-ylmethyl]-benzonitrile;

2-[2-(3-Amino-piperidin-1-yl)-9-methyl-6-oxo-6,9-dihydro-purin-1-ylmethyl]-benzonitrile;

2,6-Dichloro-7-methyl-7H-purine;
2,6-Dichloro-9-methyl-9H-purine;
2-Chloro-7-methyl-1,7-dihydro-purin-6-one;
2-Chloro-9-methyl-1,9-dihydro-purin-6-one;
2-(2-Chloro-7-methyl-6-oxo-6,7-dihydro-purin-1-ylmethyl)-benzonitrile;
2-(2-Chloro-9-methyl-6-oxo-6,9-dihydro-purin-1-ylmethyl)-benzonitrile;
2-{2-[(R)-3-Amino-piperidin-1-yl]-6-oxo-6,7-dihydro-purin-1-ylmethyl}-benzonitrile;
7-Benzylxymethyl-2,6-dichloro-7H-purine;
9-Benzylxymethyl-2,6-dichloro-9H-purine;
7-Benzylxymethyl-2-chloro-1,7-dihydro-purin-6-one;
9-Benzylxymethyl-2-chloro-1,9-dihydro-purin-6-one;
2-(7-Benzylxymethyl-2-chloro-6-oxo-6,7-dihydro-purin-1-ylmethyl)-benzonitrile;
2-(9-Benzylxymethyl-2-chloro-6-oxo-6,9-dihydro-purin-1-ylmethyl)-benzonitrile;
2-(2-Chloro-6-oxo-6,9-dihydro-purin-1-ylmethyl)-benzonitrile;
2-[2-(3-(R)-Amino-piperidin-1-yl)-6-chloro-4-oxo-4H-quinazolin-3-ylmethyl]-
benzonitrile, TFA salt;
2,6-Dichloro-3H-quinazolin-4-one;
2-(2,6-Dichloro-4-oxo-4H-quinazolin-3-ylmethyl)-benzonitrile;
2-[2-(3-(R)-Amino-piperidin-1-yl)-7-fluoro-6-methoxy-4-oxo-4H-quinazolin-3-ylmethyl]-
benzonitrile, TFA salt;
7-Fluoro-6-methoxy-1H-quinazoline-2,4-dione;
2-Chloro-7-fluoro-6-methoxy-3H-quinazolin-4-one;
2-(2-Chloro-7-fluoro-6-methoxy-4-oxo-4H-quinazolin-3-ylmethyl)-benzonitrile;
2-[2-(3-(R)-Amino-piperidin-1-yl)-6-methoxy-4-oxo-4H-pyrido[3,4-d]pyrimidin-3-
ylmethyl]-benzonitrile, TFA salt;
6-Methoxy-1H-pyrido[3,4-d]pyrimidine-2,4-dione;
2-Chloro-6-methoxy-3H-pyrido[3,4-d]pyrimidin-4-one;
2-(2-Chloro-6-methoxy-4-oxo-4H-pyrido[3,4-d]pyrimidin-3-ylmethyl)-benzonitrile;
2-[6-(3-(R)-Amino-piperidin-1-yl)-1-methyl-4-oxo-1,4-dihydro-pyrazolo[3,4-
d]pyrimidin-5-ylmethyl]-benzonitrile, TFA salt;

6-Chloro-1-methyl-1,5-dihydro-pyrazolo[3,4-*d*]pyrimidin-4-one;
2-(6-Chloro-1-methyl-4-oxo-1,4-dihydro-pyrazolo[3,4-*d*]pyrimidin-5-ylmethyl)-benzonitrile;
2-[2-(3-(*R*)-Amino-piperidin-1yl)-5-fluoro-4-oxo-4*H*-quinazolin-3-ylmethyl]-benzonitrile, TFA salt;
2-Chloro-5-fluoro-3*H*-quinazolin-4-one;
2-(2-Chloro-5-fluoro-4-oxo-4*H*-quinazolin-3-ylmethyl)-benzonitrile;
2-[5-(3-(*R*)-Amino-piperidin-1-yl)-1-methyl-7-oxo-1,7-dihydro-[1,2,3]triazolo[4,5-*d*]pyrimidin-6-ylmethyl]-benzonitrile, TFA salt;
5-Chloro-1-methyl-1,6-dihydro-[1,2,3]triazolo[4,5-*d*]pyrimidin-7-one;
2-(5-Chloro-1-methyl-7-oxo-1,7-dihydro-[1,2,3]triazolo[4,5-*d*]pyrimidin-6-ylmethyl)-benzonitrile;
2-[5-(3-(*R*)-Amino-piperidin-1-yl)-2-methyl-7-oxo-2,7-dihydro[1,2,3]triazolo[4,5-*d*]pyrimidin-6-ylmethyl]-benzonitrile, TFA salt;
5-Chloro-2-methyl-2,6-dihydro-[1,2,3]triazolo[4,5-*d*]pyrimidin-7-one;
2-(5-Chloro-2-methyl-7-oxo-2,7-dihydro-[1,2,3]triazolo[4,5-*d*]pyrimidin-6-ylmethyl)-benzonitrile;
2-[2-(3-(*R*)-Amino-piperidin-1yl)-4-oxo-5,6,7,8-tetrahydro-4*H*-quinazolin-3-ylmethyl]-benzonitrile, TFA salt;
2-Chloro-5,6,7,8-tetrahydro-3*H*-quinazolin-4-one;
2-(2-Chloro-4-oxo-5,6,7,8-tetrahydro-4*H*-quinazolin-3-ylmethyl)-benzonitrile;
2-[2-(3-(*R*)-Amino-piperidin-1yl)-6-chloro-4-oxo-4*H*-pyrido[3,4-*d*]pyrimidin-3-ylmethyl]-benzonitrile, TFA salt;
1,7-Dihydro-pyrido[3,4-*d*]pyrimidine-2,4,6-trione;
2,6-Dichloro-3*H*-pyrido[3,4-*d*]pyrimidine-4-one;
2-(2,6-Dichloro-4-oxo-4*H*-pyrido[3,4-*d*]pyrimidin-3-ylmethyl)-benzonitrile;
2-[2-(3-(*R*)-Amino-piperidin-1yl)-4-oxo-6-pyrrolidin-1yl-4*H*-pyrido[3,4-*d*]pyrimidin-3-ylmethyl]-benzonitrile;
2-[(*R*)-3-Amino-piperidin-1-yl]-6-fluoro-3-(2-trifluoromethyl-benzyl)-3*H*-quinazolin-4-one;

2-Chloro-6-fluoro-3-(2-trifluoromethyl-benzyl)-3H-quinazolin-4-one;
2-{2-[(R)-3-Amino-piperidin-1-yl]-7-isopropyl-6-oxo-6,7-dihydro-purin-1-ylmethyl}-benzonitrile;
2-[2-(3-Amino-azepan-1-yl)-6-oxo-6,7-dihydro-purin-1-ylmethyl]-benzonitrile;
2-{2-[(R)-3-Amino-piperidin-1-yl]-7-benzyl-6-oxo-6-hydro-purin-1-ylmethyl}-benzonitrile;
2-{2-[(R)-3-Amino-piperidin-1-yl]-9-(2-cyano-benzyl)-6-oxo-6-hydro-purin-1-ylmethyl}-benzonitrile;
2-{2-[(R)-3-Amino-piperidin-1-yl]-6-oxo-9-propyl-6,9-dihydro-purin-1-ylmethyl}-benzonitrile;
2-{2-[(R)-3-Amino-piperidin-1-yl]-6-oxo-7-propyl-6,7-dihydro-purin-1-ylmethyl}-benzonitrile;
2-Chloro-9-propyl-1,9-dihydro-purin-6-one;
2-Chloro-7-propyl-1,7-dihydro-purin-6-one;
2-(2-Chloro-6-oxo-9-propyl-6,9-dihydro-purin-1-ylmethyl)-benzonitrile;
2-(2-Chloro-6-oxo-7-propyl-6,7-dihydro-purin-1-ylmethyl)-benzonitrile;
2-{2-[(R)-(3-Amino-piperidin-1-yl)]-9-isopropyl-6-oxo-8-trifluoromethyl-6,9-dihydro-purin-1-ylmethyl}-benzonitrile;
6-Chloro-N4-isopropyl-pyrimidine-2,4,5-triamine;
6-Chloro-9-isopropyl-8-trifluoromethyl-9H-purin-2-ylamine;
2-(2-Amino-9-isopropyl-6-oxo-8-trifluoromethyl-6,9-dihydro-purin-1-ylmethyl)-benzonitrile;
2-(2-Bromo-9-isopropyl-6-oxo-8-trifluoromethyl-6,9-dihydro-purin-1-ylmethyl)-benzonitrile;
2-[2-(3-(R)-Amino-piperidin-1-yl)-6-bromo-4-oxo-4H-quinazolin-3-ylmethyl]-benzonitrile;
6-Bromo-1H-quinazoline-2,4-dione;
6-Bromo-2-chloro-3H-quinazolin-4-one;
2-(6-Bromo-2-chloro-4-oxo-4H-quinazolin-3-ylmethyl)-benzonitrile;

2-[2-(3-(R)-Amino-piperidin-1-yl)-6-bromo-4-oxo-4H-quinazolin-3-ylmethyl]-benzonitrile, TFA salt;

2-[2-(3-(R)-Amino-pyrrolidin-1-yl)-6-bromo-4-oxo-4H-quinazolin-3-ylmethyl]-benzonitrile, TFA salt;

2-[2-(3-(R)-Amino-piperidin-1-yl)-6,8-dichloro-4-oxo-4H-quinazolin-3-ylmethyl]-benzonitrile;

6,8-Dichloro-1H-quinazoline-2,4-dione;

2,6,8-Trichloro-3H-quinazolin-4-one;

2-(2,6,8-Trichloro-4-oxo-4H-quinazolin-3-ylmethyl)-benzonitrile;

2-[2-(3-(R)-Amino-piperidin-1-yl)-6-methoxy-4-oxo-4H-quinazolin-3-ylmethyl]-benzonitrile;

6-Methoxy-1H-quinazoline-2,4-dione;

2,4-Dichloro-6-methoxy-quinazoline;

2-Chloro-6-methoxy-3H-quinazolin-4-one;

2-(2-Chloro-6-methoxy-4-oxo-4H-quinazolin-3-ylmethyl)-benzonitrile;

2-[2-(3-(R)-Amino-piperidin-1-yl)-6-fluoro-4-oxo-4H-quinazolin-3-ylmethyl]-benzamide;

2-[2-(3-(R)-Amino-piperidin-1-yl)-6-fluoro-7-morpholin-4-yl-4-oxo-4H-quinazolin-3-ylmethyl]-benzonitrile;

6,7-Difluoro-1H-quinazoline-2,4-dione;

6-Fluoro-7-morpholin-4-yl-1H-quinazoline-2,4-dione;

2,4-Dichloro-6-fluoro-7-morpholin-4-yl-quinazoline;

2-Chloro-6-fluoro-7-morpholin-4-yl-3H-quinazolin-4-one;

2-(2-Chloro-6-fluoro-7-morpholin-4-yl-4-oxo-4H-quinazolin-3-ylmethyl)-benzonitrile;

2-[2-(3-Amino-piperidin-1-yl)-6-fluoro-4-oxo-4H-quinazolin-3-ylmethyl]-benzamide;

2-[3-(R)-Amino-piperidin-1-yl]-6-fluoro-3-(2-trifluoromethyl-benzyl)-3H-quinazolin-4-one;

2-(3-Amino-piperidin-1-yl)-6,7-dimethoxy-3-(2-nitro-benzyl)-3H-quinazolin-4-one;

2-[2-(3-Amino-piperidin-1-yl)-6,7-dimethoxy-4-oxo-4H-quinazolin-3-ylmethyl]-benzoic acid ethyl ester;

2-[2-(3-Amino-piperidin-1-yl)-6-fluoro-4-oxo-4H-quinazolin-3-ylmethyl]-benzoic acid ethyl ester;

2-[2-(3-Amino-piperidin-1-yl)-6,7-dimethoxy-4-oxo-4H-quinazolin-3-ylmethyl]-benzoic acid;

2-[2-(3-Amino-piperidin-1-yl)-6-fluoro-4-oxo-4H-quinazolin-3-ylmethyl]-benzoic acid; and

2-(6,7-Dimethoxy-4-oxo-2-piperidin-1-yl-4H-quinazolin-3-ylmethyl)-benzonitrile.